

**California Environmental Protection Agency
Department of Toxic Substances Control
Green Chemistry Initiative Science Advisory Panel
November 27, 2007**

Meeting Notes

Meeting Participants

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|-----------------------|-------------------------|
| ▪ Dr. Paul Anastas | ▪ Dr. Lauren Heine |
| ▪ Dr. John Balmes | ▪ Dr. Mary O'Brien |
| ▪ Dr. Michael Dourson | ▪ Dr. Barry Trost |
| ▪ Dr. William Carroll | ▪ Dr. John Warner |
| ▪ Dr. Gail Charnley | ▪ Dr. Michael Wilson |
| ▪ Dr. Daryl Ditz | ▪ Dr. Katy Wolf |
| ▪ Dr. Ken Geiser | ▪ Maureen Gorsen, DTSC |
| ▪ Dr. Lynn Goldman | ▪ Anne Baker, DTSC |
| ▪ Dr. John Graham | ▪ Jeff Wong, DTSC |
| ▪ Dr. Robert Grubbs | ▪ Kathy Barwick, DTSC |
| ▪ Dr. Neil Hawkins | ▪ Emerson - facilitator |

Meeting Objectives

- Clarify DTSC's expectations and final product from the Science Advisory Panel.
- Develop subcommittee structure and enrollment process.
- Develop next steps for subcommittees and January 10th meeting.

Welcome/Introduction

- John Warner opened up the meeting and welcomed participants. John Balmes followed by saying a few words about the change in the ground rules to allow for public listening of the SAP meetings.
- Participants introduced themselves.
- Meeting notes from the October 23, 2007 SAP meeting were reviewed, amendments suggested, and approved with the recommended changes.
- Today's meeting agenda was reviewed and revised as follows:
 - The presentation and discussion about the Education and the Environment program was postponed until January.

Review of Mission & Vision Statements

- The revised mission/vision statement was reviewed
- There were concerns expressed about the wording of the third bullet, regarding use of the word "toxic." The concerns focused on the issue of how to distinguish substances that are less toxic from those that are more toxic. Other concerns expressed concerning the use of the word "toxic" included:
 - too narrow a scope
 - doesn't include life cycle issues
 - doesn't address persistence
 - doesn't address cumulative exposures

There was additional discussion regarding the concern that the SAP might continue to focus on how and why risk assessments are performed. The SAP agreed to leave the draft mission/vision unrevised for the present, and requested that the "draft" watermark be retained to allow for further discussion and refinement.

- There was a request for clarification on the first bullet. Because this is a correction of a clerical error in incorporating comments from the first SAP review of the vision statement, revisions were made and posted to the web work space, as follows:

Implement strategies to stimulate a green chemistry industrial revolution to drive technological innovation and the development of safer, healthier, and more environmentally benign chemicals, products and processes across their life cycles impacts.

Discussion: DTSC Director Maureen Gorsen

- Director Gorsen thanked the SAP for their efforts and observed that the SAP's mission and vision statements are on target.
- Director Gorsen reviewed the document entitled "Green Chemistry Foundational Recommendations" and asked SAP members for their feedback, especially on the first two items. She then talked about the role of the SAP in advising her on green chemistry. Discussion items included:
 - The relationship of the first two items (training future scientists, incorporating green chemistry principles into the Environmental Education Initiative) to research.
 - A SAP member mentioned that the Society of Toxicologists has a fifteen-minute video on toxicity and volunteered to make it available to the panel.
 - Key findings from the two-day seminar hosted by the Office of Environmental Health Hazard Assessment were noted, including a lack of data on chemicals used in California, and the importance to businesses about having information about chemicals.
 - The need to define what is "toxic," "bioaccumulative," etc. in California.
 - Discussion on the use of the word "toxic." There were suggestions to focus on the development of benign products and processes, and so bypass arguments of toxicity.
 - Suggestion to use the word "hazardous" rather than "toxic," as a broader and more useful term.
 - Suggestion to talk about Green Chemistry in a positive sense, and avoid "toxicity" as a singular issue. There was discussion about it being easier to talk about what we mean by "green" and what is good, rather than what is bad. General sense that the discussion should be more about qualitative attributes of materials.
 - Question about the third bullet: what does "developing" mean? Assembling, rather than generating new information? Answer: yes, more the former.
 - The last two items of the "foundational" document are less concrete, and more a recognition that there needs to be something about those topics.
 - More discussion on what Director Gorsen would like from the SAP:
 - Feedback on foundational document, more specificity if possible.
 - Between January and July of 2008, we need a recommended "framework" for green chemistry. Director Gorsen would like the SAP view by May 2008.
 - Question: can the SAP submit its ideas about the "foundational" list? Answer: yes, submit soon. Ideas should be submitted to Jeff, Kathy, or the SAP work space.
 - There was a reminder to the group that while consensus is good when possible, it is not required of the SAP.

Discussion of the Draft Ground Rules

The draft ground rules were reviewed. A change to the ground rules regarding public access to the SAP meetings was discussed. DTSC staff noted that the change was made with respect to a recent lawsuit on the matter. DTSC staff affirmed that meetings of the Science Advisory Panel would be open to the public, and that subcommittee meetings will not be subject to that requirement. Comments specific to this issue included:

- Consider the trade-offs between transparency/public access and the more frank discussions that can occur in a closed session. Brainstorming may be limited.
- It is appropriate for the SAP to determine its own ground rules.
- There is a potential for the SAP efforts, and the usefulness of its product, to be undermined if the process is closed.
- Clarification was requested on conversations outside of the meetings; DTSC staff noted that the need to make SAP meetings open to the public does not affect other conversations, or subcommittee meetings of the SAP.

Other comments on the ground rules included:

- Need to define “consensus.”
- There was a comment regarding potential difficulty, given the make-up of the SAP, to get a single document or point of view that the SAP endorses. The commenter suggested that instead, the SAP should facilitate expert advice and input into the process of developing the recommendations for Secretary Adams.

It was moved that the ground rules be approved; no objections were heard.

Subcommittee Structure

Dr. Warner introduced the subcommittee structure proposal, and reviewed how it was developed. Noting that there are many ways to organize, the SAP was asked to determine if there were any missing elements in the proposal.

After discussion, the following suggestions were made for revisions:

- #1, last bullet, include NGOs
- #5, add as 2nd bullet: “What are some of the major areas of concern [classes of materials processes], where alternatives are available but not being used?”
- Suggestion to add “advancing green chemistry through” to the beginning of each subcommittee, to make sure they make sense. The outcome of this discussion was that the SAP members on this committee will determine the most appropriate name for the subcommittee.
- Subcommittee membership was solicited at the end of the meeting. Results are posted on the SAP work space. Subcommittees will designate chairs & co-chairs.
- A question was asked about the operation of subcommittees relative to the overall SAP. Dr. Warner clarified: subcommittees frame the specific topics for subsequent discussions with the entire SAP (five parallel efforts).

SAP meeting in San Francisco on January 10, 2008

- Kathy briefly reviewed expectations for the January 10, 2008 SAP meeting in San Francisco, including a brief review of agenda items and travel arrangements. Initial agenda items include reports from the subcommittee, and opportunities for public comment.
- Kathy asked that after subcommittees meet that they communicate regarding ideas for agenda items.

Meeting Evaluation

SAP members were requested to provide feedback on the meeting via the SAP work space. A discussion thread entitled "Feedback on the 11.27.07 SAP meeting" has been created for this purpose. SAP members are encouraged to state what worked well, and what could be improved on in the future, in this space.

Parking Lot

How will the SAP deal with the media? Should we develop ground rules for interacting with the media and for press releases?